

Amendment and Response

Applicant: Jason D. Hanzlik et al.

Serial No.: 10/730,698

Filed: December 8, 2003

Docket No.: 10395US01

Title: TAPE REEL ASSEMBLY WITH WEAR RESISTANT DRIVEN TEETH

REMARKS

The following remarks are made in response to the Final Office Action mailed March 17, 2006 and to the Advisory Action mailed May 11, 2006. In the Final Office Action, claims 1, 3-6, 10, 12-15, 17, 19-23, 25, and 26 were rejected under 35 U.S.C. § 102(b) as anticipated by Morita et al., U.S. Patent Publication No. 2002/0158161 ("Morita"), and claims 2, 7-9, 11, 16, 18, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita in view of Boutni, U.S. Patent No. 4,749,738 ("Boutni").

With this Response, claims 3-4, 12-13, and 19-22 have been cancelled, and claims 1, 10, and 17 have been amended. Claims 1-2, 5-11, 14-18, and 23-26 remain pending in the application and are presented for consideration and allowance.

35 U.S.C. § 102 Rejections

Claims 1, 3-6, 10, 12-15, 17, 19-23, 25, and 26 were rejected under 35 U.S.C. § 102(b) as being anticipated by Morita.

The Examiner takes the position at page 2 of the Final Office Action mailed March 17, 2006, that Morita teaches a tape reel assembly including a hub defining a tape winding surface and teeth 42 and 63. This interpretation was discussed with the Examiner in a teleconference on June 5, 2006. The Examiner's position, with reference to Morita at FIG. 3, is that the restraining member 4 and the releasing member 6 (having teeth 63) are separate components that couple with the hub to restrain its movement, such that the hub can be broadly viewed to "include" teeth 63. To this end, the Examiner suggested that amendments to the pending claims to positively recite driven teeth that are integrally formed by the hub would obviate the rejections under section 102 to the claims, which is noted with appreciation.

With this in mind, independent claim 1 has been amended to provide a hub portion including a hub defining a tape winding surface that includes a first end and an opposing second end, a flange extending in a radial fashion from an end of the hub, and driven teeth integrally formed by the hub as an extension of one of the opposing ends of the tape winding surface and

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defining an engagement surface, where the driven teeth are formed from a polymer including a lubricating additive.

Support for the language of amended independent claim 1 is located throughout the specification, for example, at page 10, line 23 to page 11, line 24, and in FIGS. 2-6. No new matter has been added.

Morita does not teach or suggest driven teeth integrally formed by a hub as an extension of one of the opposing ends of a tape winding surface that define an engagement surface, where the driven teeth are formed from a polymer including a lubricating additive, as required by amended independent claim 1. It is respectfully requested that the rejection to claim 1, and claims depending from claim 1, under 35 U.S.C. § 102(b) as anticipated by Morita be withdrawn.

Independent claim 10 has been amended to provide a data storage tape cartridge including a housing defining an enclosed region, and at least one tape reel assembly rotatably disposed within the enclosed region and including a hub defining a tape-winding surface that extends between a first end and an opposing second end, the hub integrally forming driven teeth as an extension of one of the first and second ends, the driven teeth defining an engagement surface, and where the driven teeth are exposed within an opening in the housing upon final assembly and are formed from a polymer including a lubricating additive.

Support for the language of amended independent claim 10 is located throughout the specification, for example, at page 10, line 23 to page 11, line 24, and in FIGS. 2-6. No new matter has been added.

Morita fails to teach or suggest a hub defining a tape-winding surface that extends between a first end and an opposing second end, where the hub integrally forms driven teeth as an extension of one of the first and second ends, the driven teeth defining an engagement surface formed from a polymer including a lubricating additive, as required by amended independent claim 10. In addition, note that neither of gear/teeth 42 of restraining member 4 nor surfaces of push up portion 63 of releasing member 6 are exposed within an opening in the housing upon final assembly, as required by amended independent claim 10.

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It is respectfully requested that the rejection to claim 10, and claims depending from claim 10, under 35 U.S.C. § 102(b) as anticipated by Morita be withdrawn.

Independent claim 17 has been amended to provide a method of fabricating a tape reel assembly for a data storage tape cartridge including providing a polymer including a lubricating additive, and generating a hub from the polymer, the hub including a tape winding surface that defines opposing ends and an integrally formed lower flange, the hub having driven teeth integrally formed thereon, where the driven teeth project outwardly relative to one of the opposing ends of the tape winding surface.

Support for the language of amended independent claim 17 is located throughout the specification, for example, at page 10, line 23 to page 11, line 24, and in FIGS. 2-6. No new matter has been added.

Morita does not teach or suggest generating a hub from a polymer including a lubricating additive, the hub including a tape winding surface that defines opposing ends and an integrally formed lower flange, the hub having driven teeth integrally formed thereon, as required by amended independent claim 17. It is respectfully requested that the rejection to claim 17, and claims depending from claim 17, under 35 U.S.C. § 102(b) as anticipated by Morita be withdrawn.

Based upon the above, it is respectfully submitted that claims 1, 3-6, 10, 12-15, 17, 19-23, 25, and 26 cannot be anticipated by Morita. Thus, it is respectfully requested that the rejections to these claims under 35 U.S.C. § 102(b) as anticipated by Morita be withdrawn.

35 U.S.C. § 103 Rejections

Claims 2, 7-9, 11, 16, 18, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita in view of Boutni. It is conceded at page 4 of the Final Office Action mailed March 17, 2006, that Morita does not disclose a polymer including up to 25%, 2-10%, or 5% by weight lubricating additive, and that Morita does not disclose polycarbonate that is 20% glass-filled and containing approximately 5% by weight polytetrafluoroethylene. Boutni is asserted as teaching components formed from such compounds. The Examiner concludes that it would have been

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obvious to one having ordinary skill in the art to form the teeth 42 and 63 of Morita to include the polymer compositions taught by Boutni. Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, each of the three following basic criteria must be met. First, there must be some suggestion or motivation to modify or combine the reference teachings. Second, there must exist a reasonable expectation of success. Third, the references must teach or suggest all of the claim limitations. MPEP § 2143.

The Cited References Fail to Teach or Suggest All Claim Limitations

The Examiner cites Morita at paragraph 119 as teaching teeth that include a lubricating additive. In paragraph 119, Morita teaches that restraining member 4 (teeth 42) or releasing member 6 (push up portion 63) can be formed with a resin containing a lubricant. However, neither the restraining member 4 nor releasing member 6 are part of the hub 21 as defined by Morita, and neither meet the requirements of a hub as recited in amended independent claims 1, 10, or 17.

In particular, Morita teaches at paragraph 108: "The reel 2 consists of a bottom cylindrical reel hub 21, in which magnetic tape is wound on the outer periphery, and upper and lower flange portions 22 and 23 respectively projected in disk form in the radial direction from the upper and lower ends of the outer periphery of this reel hub 21." (See FIGS. 2 and 3). Morita teaches that the reel 2 includes a reel gear 24, and in paragraphs 113-117 teaches that the restraining member 4 and the releasing member 6 move independently of the reel 2 to selectively lock (prevent rotation) and unlock (permit rotation) the reel 2.

Therefore, based upon the express teaching of Morita, the reel 2/hub 21 does not include teeth 42 and 63. In addition, Morita appears to be silent as regards material selection for reel 2 and hub 21. Note that Morita discusses molding of reel 2 in paragraphs 186-203, but the discussion appears directed to managing gate locations and insertion of ring 78.

Consequently, the purported combination fails to teach or suggest a hub integrally forming driven teeth at an opposing end of a tape winding surface, where the driven teeth define

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an engagement surface formed from a polymer including a lubricating additive, as required by amended independent claims 1, 10, and 17, such that a *prima facie* case of obviousness cannot be established.

No Reasonable Expectation of Success in the Purported Combination

Applicants respectfully submit that there is no suggestion or motivation available in the cited references to modify the reel 2 of Morita having teeth 24 to include the additives taught by Boutni. In this regard, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not in Applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); MPEP § 2143. Since Morita is silent as to the resin selection for reel 2 and gears 24, there is no basis upon which to form a motivation to select materials for Morita, much less the specific materials taught in Boutni.

However, apart from the apparent absence of motivation to combine the references, even if the purported combination is made, the resulting device would merely provide the reel-rotation restraining means 10 of Morita (elements 4 and 6) with the polymer compositions taught by Boutni. Thus, the purported combination would fail to provide a hub integrally forming driven teeth at an opposing end of a tape winding surface, where the driven teeth define an engagement surface formed from a polymer including a lubricating additive, as required by amended independent claims 1, 10, and 17.

Based upon the above, it is respectfully requested that the rejections to claims 2, 7-9, 11, 16, 18, and 24 under 35 U.S.C. § 103(a) as unpatentable over Morita in view of Boutni be withdrawn.

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CONCLUSION

Applicants respectfully submit that pending claims 1-2, 5-11, 14-18, and 23-26 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-2, 5-11, 14-18, and 23-26 is respectfully requested.

No fees are required under 37 C.F.R. § 1.16(h)(i) for the addition of claims. However, if other fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 09-0069.

The Examiner is invited to telephone the Applicants' representative at the below-listed numbers to facilitate prosecution of this application.

Respectfully submitted,

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